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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PHILLIPS, HASSAN A

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/764,247

Applicant(s)

BRESSOUD ET AL.

Examiner

Hassan Phillips

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2001.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
4a) Of the above claim(s) 15-29 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☒ Claim(s) 1 and 15 are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 17 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- A) Claim 1, drawn to a method for maintaining a connection between a server and a client classified in class 709, subclass 203.
- B) Claim 15, drawn to computer-to-computer protocol implementing classified in class 709, subclass 230.

The inventions are distinct from each other for the following reasons:

Inventions A and B are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention A has separate utility for maintaining a connection between a server and a client, which is separately usable with or without invention B, which is implementing a computer-to-computer protocol within a network. See § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

In a phone message left by Matthew Hodulik (Reg. No. 36164) on March 31, 2004, a provisional election was made without traverse to prosecute invention A. Applicant in replying to this office action must make affirmation of this election. Claims

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15-29 are withdrawn from further consideration by the Examiner, (See 37 CFR 1.142(b)), as being drawn to a non-elected invention.

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

1. Claim 6 recites the limitation "the application" in lines 2 and 4. There is insufficient antecedent basis for this limitation in the claim. In order for the examiner to complete the examination of the application for patent, the examiner has interpreted "the application" to mean "the server" of claim 1.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4, 5, 7, 12, are rejected under 35 U.S.C. 102(e) as being anticipated by Waldo et al. (hereinafter Waldo), U.S. patent 6,016,500.
3. In considering claim 1, Waldo teaches a method for maintaining a connection between a server and a client comprising the steps of:
 - a) receiving, storing, and transmitting one or more message elements, (col. 12, lines 59-62, and col. 13, lines 32-35);
 - b) determining whether the server has failed and when the server has failed, restoring the server to a pre-failure connection state using one or more of the stored message elements, (col. 13, lines 35-40).
4. In considering claim 4, the method of Waldo further teaches:
 - a) determining whether to discard the message, (col. 18, lines 14-17);
 - b) not transmitting, and discarding the message when the message is to be discarded, (col. 18, lines 17-21).
5. In considering claim 5, the method of Waldo further teaches:
 - a) determining whether to modify the message, (col. 18, lines 11-13);
 - b) modifying one or more elements of the message when the message is to be modified, (col. 18, lines 13-14).

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6. In considering claim 7, it is inherent that the method of Waldo comprises a means for periodically storing a current state of the server and discarding any stored elements that are no longer needed to restore the server to the current state. See col. 13, lines 5-13.

7. In considering claim 12, the method of Waldo discloses a memory in the server for storing the one or more message elements. See col. 10, lines 40-47.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 3, 10, 11, 13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldo in view of Hickman et al. (hereinafter Hickman), U.S. patent 6,523,130.

3. In considering claim 2, although the disclosed method of Waldo shows substantial features of the claimed invention it fails to expressly disclose:

a) delaying transmission of the message.

Nevertheless, in a similar field of endeavor, Hickman teaches a system having error detection and recovery comprising:

- a) delaying a message until one or more elements of the message are successfully stored in a restored storage server 204, (col. 10, lines 61-67, col. 11, lines 1-6).

Given the teachings of Hickman, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Waldo to delay transmission of the message if the client/server failed, and transmitting the message after the client/server restored. This would provide an efficient means for transmitting data to/from the client/server in the case of client/server failure. This would also prevent losing important data while the client/server is being restored, Hickman, col. 10, lines 59-64.

4. In considering claim 3, although the disclosed method of Waldo shows substantial features of the claimed invention it fails to expressly disclose:

- a) delaying transmission of the message until an element of the message is successfully stored.

Nevertheless, in a similar field of endeavor, Hickman teaches a system having error detection and recovery comprising:

- a) delaying a message until one or more elements of the message are successfully stored in a restored storage server 204, (col. 10, lines 61-67, col. 11, lines 1-6).

Given the teachings of Hickman, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Waldo to delay transmission of the message if the client/server failed, and transmitting the remaining elements of the message after the client/server restored. This would provide an efficient means for transmitting data to/from the client/server in the case of client/server failure. This would also prevent losing important data while the client/server is being restored, Hickman, col. 10, lines 59-64.

5. In considering claim 10, although the disclosed method of Waldo shows substantial features of the claimed invention it fails to expressly disclose:

- a) storing a message element in a log server.

Nevertheless, in a similar field of endeavor, Hickman teaches a system having error detection and recovery comprising:

- a) storing message elements in a log server 208, (col. 10, lines 51-53).

Given the teachings of Hickman, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Waldo to store one or more of the message elements in a log server. This would facilitate in determining what state the client/server was in before failing, and would further assist in returning the client/server to the proper state once the client/server is restored, Hickman, col. 10, lines 59-61.

6. In considering claim 11, although the disclosed method of Waldo shows substantial features of the claimed invention it fails to expressly disclose:

- a) a log server remotely located from the server.

Nevertheless, in a similar field of endeavor, Hickman teaches a system having error detection and recovery comprising:

- a) a log server 208 remotely located from the server, (see fig. 6).

Given the teachings of Hickman, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Waldo to have a log server remotely located from the server. This would facilitate in determining what state the client/server was in before failing, and would further assist in returning the client/server to the proper state once the client/server is restored, Hickman, col. 10, lines 59-61.

7. In considering claim 13, although the disclosed method of Waldo shows substantial features of the claimed invention it fails to expressly disclose:

- a) storing message elements in a secondary server.

Nevertheless, in a similar field of endeavor, Hickman teaches a system having error detection and recovery comprising:

- a) storing message elements in a secondary server 208, (col. 10, lines 51-53).

Given the teachings of Hickman, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Waldo to

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store one or more of the message elements in a secondary server. This would facilitate in determining what state the client/server was in before failing, and would further assist in returning the client/server to the proper state once the client/server is restored, Hickman, col. 10, lines 59-61.

8. Claims 6, 14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldo in view of Harsch, U.S. patent 6,212,175.

9. In considering claim 6, although the disclosed method of Waldo shows substantial features of the claimed invention it fails to expressly disclose:

- a) periodically transmitting an outgoing message to maintain a connection until the server is restored.

Nevertheless, in a similar field of endeavor, Harsch teaches a method for maintaining a connection between a client and server comprising:

- a) periodically transmitting a message 390 to maintain a connection until a mobile unit 66 powers up, (col. 11, lines 66-67, col. 12, lines 1-2).

Given the teachings of Harsch, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Waldo to periodically transmit outgoing messages to maintain a connection until the server is restored. Doing so would ensure the client and server remain connected while the server is being restored, Harsch, col. 11, lines 61-66.

10. In considering claim 14, although the disclosed method of Waldo shows substantial features of the claimed invention it fails to expressly disclose:

- a) periodically transmitting an outgoing message to maintain a connection until the server is restored.

Nevertheless, in a similar field of endeavor, Harsch teaches a method for maintaining a connection between a client and server comprising:

- a) periodically transmitting a message 390 to maintain a connection until a mobile unit 66 powers up, (col. 11, lines 66-67, col. 12, lines 1-2).

Given the teachings of Harsch, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Waldo to periodically transmit outgoing messages to maintain a connection until the server is restored. Doing so would ensure the client and server remain connected while the server is being restored, Harsch, col. 11, lines 61-66.

11. Claims 8, 9, are rejected under 35 U.S.C. 103(a) as being unpatentable over Waldo in view of Devarakonda et al. (hereinafter Devarakonda), U.S. patent 5,566,297.

12. In considering claim 8, although the disclosed system of Waldo shows substantial features of the claimed invention, it fails to expressly disclose:

- a) the message being a protocol segment.

Nevertheless protocol segment messages sent between clients and servers were well known in the art at the time of the present invention. This is exemplified by the

methods of Devarakonda, who teaches a method of recovery from server failure comprising:

- a) protocol segment messages, (col. 2, lines 38-40, also see fig. 3).

Given the teachings of Devarakonda it would have been apparent to one of ordinary skill in the art to modify the teachings of Waldo to have the messages be protocol segment messages. This would have provided a well known means of communication between the client and the server, Devarakonda, col. 1, lines 14-21.

13. In considering claim 9, although the disclosed system of Waldo shows substantial features of the claimed invention, it fails to expressly disclose:

- a) conforming to the Transmission Control Protocol (TCP) standard.

Nevertheless messages conforming to the TCP standard were well known in the art at the time of the present invention. This is exemplified by the methods of Devarakonda, who teaches a method of recovery from server failure comprising:

- a) conforming to a TCP standard, (col. 2, lines 7-9).

Given the teachings of Devarakonda it would have been apparent to one of ordinary skill in the art to modify the teachings of Waldo to have the messages conform to the TCP standard. This would have provided a well known means of communication between the client and the server, Devarakonda, col. 1, lines 14-21.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Waldo et al., U.S. Patent 6,016,500 discloses a method of detecting and performing failure recovery in a client/server system.

Hickman et al., U.S. Patent 6,523,130 discloses a storage system having error detection and recovery.

Devarakonda et al., U.S. Patent 5,566,297 discloses a method for transparently recovering from server failure.

Harsch, U.S. Patent 6,212,175 discloses a method for sustaining a TCP connection in a client/server system.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hassan Phillips whose telephone number is (703) 305-8760. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HP
4/6/04



FRANTZ B. JEAN
PRIMARY EXAMINER